

## **REMARKS**

### **The Interview**

Applicants thank the Examiner for the interview conducted on December 8, 2005 and for the comments provided in aiding applicants in furthering the prosecution of this application.

During the interview it was agreed upon that the prior art does not teach that the cells of the packing orient the circulation of flow in a substantially radial direction.

It was also agreed upon that a limitation inserted into claim 24 which excludes a venturi tube shape would overcome the prior art and would be entered after final. In this regard claim 24 is amended to recite that the downcomers are "cylindrical shaped." Support for this amendment can be found in the figures of the application, for example.

### **The Claim Objections and Claim Rejections Under 35 USC § 112, second paragraph**

These objections and rejections are overcome by the amendments.

Claim 1 is also amended for the same section 112, second paragraph issues as claim 23, even though no rejection to claim 1 was made.

Claim 4 is rewritten in independent form.

### **Claim Rejections Under 35 USC § 103**

Applicants disagree with the rejections, but to advance the prosecution of this application amended claim 24 as discussed above.

Jensen teaches venturi shaped eductors through which fluids pass in a reactor. Jensen teaches that in the eductors "downflowing vapors achieve a gas velocity of from 60 to about 400 feet/second, or more, thus creating a high degree of liquid dispersion as the liquid-phase components are educted into the venturi-tube proximate to the throat." See column 2, lines 26-31. Jensen further teaches on column 9, lines 19-21 that "precise design is optimized to achieve the maximum efficiency accompanied by the lowest tray operating pressure drop." One of ordinary skill in the art based on this disclosure would not have been motivated to place a packing into the venturi shaped eductors, as such would have been contrary to the goals/objectives/operation parameters of the Jensen reference.

Jensen teaches that a "principal object of my invention is to provide uniform distribution of a mixed-phase vapor/liquid reactant stream to a fixed-bed of catalyst particles." See column 2, lines 38-41. Thus, the uniform distribution is below, i.e., outside

of, the eductors to the catalyst particles.

Hearn teaches packed distillation columns in which gas and liquid are evenly distributed across the packed column, i.e., within the columns, and not below and outside as in Jensen.

Additionally, the packing of Hearn is not taught to achieve a circulation zone in the packing. Instead, Hearn teaches the use of distribution elements that are corrugated and have openings in rows at peaks and valleys of the corrugations. See column 3, line 46 to column 4, line 10. Thus, the effect based on this arrangement appears to be an evenly distributed downward shower of the fluids as they pass through the distribution elements.

Additionally, neither reference teaches or suggests a downcomer as claimed which is cylindrical in shape and contains a packing.

Goebel does not cure the deficiencies of the first two references and it is only cited to teach a vessel generally.

Reconsideration is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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